

WHAT IS CLAIMED IS:

- 1 1. A network interface device located at a customer's premises,
2 comprising:
 - 3 an external interface that receives a plurality of telecommunication services
 - 4 via a coaxial connection from a telecommunication service provider, wherein the services are
 - 5 received using Data Over Cable Service Interface Specifications;
 - 6 at least two distinct internal interfaces that distribute the plurality of
 - 7 telecommunication services to at least two distinct internal transport media; and
 - 8 a processor programmed to:
 - 9 receive combined signals comprising the telecommunication services
 - 10 from the external interface;
 - 11 process the combined signals into separate signals representative of
 - 12 distinct telecommunication services; and
 - 13 map each of the separate signals to separate ones of the at least two
 - 14 distinct internal interfaces for distribution at the customer's premises via the internal transport
 - 15 media.
- 1 2. The network interface device of claim 1, wherein the external interface
2 is further configured to direct signals relating to the telecommunication services to the
3 telecommunication service provider via the coaxial connection using Data Over Cable
4 Service Interface Specifications.
- 1 3. The network interface device of claim 1, wherein at least one of the at
2 least two distinct internal interfaces is configured to receive signals relating to one of the
3 telecommunication services from one of the internal transport media.
- 1 4. The network interface device of claim 1, wherein the processor is
2 further programmed to:
 - 3 receive separate signals from the at least two distinct internal transport media;
 - 4 process the separate signals into a combined signal; and
 - 5 direct the combined signal to the external interface for distribution to the
 - 6 telecommunication service provider via the coaxial connection using Data Over Cable
 - 7 Service Interface Specifications.

1 5. The network interface device of claim 1, further comprising a signal
2 integrator in communication with the at least two distinct internal interfaces, wherein the
3 signal integrator is operable to integrate signals from the at least two distinct internal
4 transport media into a combined information set.

1 6. The network interface device of claim 1, wherein at least one of the
2 internal transport media comprises a coaxial cable.

1 7. The network interface device of claim 1, wherein at least one of the
2 internal transport media comprises a twisted pair cable.

1 8. The network interface device of claim 7, wherein the twisted pair cable
2 comprises existing telephone wiring at the customer premises.

1 9. The network interface device of claim 7, wherein the twisted pair cable
2 comprises an Ethernet cable.

1 10. The network interface device of claim 1, wherein the
2 telecommunication services comprise one or more selections from the group consisting of
3 video, data, and voice.

1 11. The network interface device of claim 10, wherein different
2 telecommunication services are transported in different frequency ranges.

1 12. The network interface device of claim 1, wherein the internal
2 interfaces comprise a selection from the group consisting of IEEE 1394, RG6, RG59,
3 wireless interface, 802.11, LMDS, Ethernet, twisted pair, category 3, category 4, category 5,
4 category 6, category 7, and coaxial.

1 13. The network interface device of claim 1, wherein signals are
2 transported on the internal transport media using a protocol selected from the group
3 consisting of HPNA, HPNA+, and Home Plug.

1 14. The network interface device of claim 1, wherein the plurality of
2 telecommunication services originate from a plurality of telecommunication service
3 providers.

1 15. A system for providing telecommunication services to a customer's
2 premises, comprising:
3 an external transport medium comprising a coaxial distribution system that
4 uses Data Over Cable Service Interface Specifications to deliver the telecommunication
5 services to the customer's premises; and
6 a network interface device at the customer's premises, wherein the network
7 interface device comprises:
8 an external interface that receives a plurality of telecommunication
9 services via the external transport medium;
10 at least two distinct internal interfaces that distribute the plurality of
11 telecommunication services to at least two distinct internal transport media; and
12 a processor programmed to:
13 receive combined signals comprising the telecommunication
14 services from the external interface;
15 process the combined signals into separate signals
16 representative of distinct telecommunication services; and
17 map each of the separate signals to separate ones of the at least
18 two distinct internal interfaces for distribution at the customer's premises via the internal
19 transport media.

1 16. The system of claim 15, wherein the external interface is further
2 configured to direct signals relating to the telecommunication services to the
3 telecommunication service provider via the coaxial connection using Data Over Cable
4 Service Interface Specifications.

1 17. The system of claim 15, wherein at least one of the at least two distinct
2 internal interfaces is configured to receive signals relating to one of the telecommunication
3 services from one of the internal transport media.

1 18. The system of claim 15, wherein the processor is further programmed
2 to:
3 receive separate signals from the at least two distinct internal transport media;
4 process the separate signals into a combined signal; and

5 direct the combined signal to the external interface for distribution to the
6 telecommunication service provider via the coaxial connection using Data Over Cable
7 Service Interface Specifications.

1 19. The system of claim 15, further comprising a signal integrator in
2 communication with the at least two distinct internal interfaces, wherein the signal integrator
3 is operable to integrate signals from the at least two distinct internal transport media into a
4 combined information set.

1 20. The system of claim 15, wherein at least one of the internal transport
2 media comprises a coaxial cable.

1 21. The system of claim 15, wherein at least one of the internal transport
2 media comprises a twisted pair cable.

1 22. The system of claim 21, wherein the twisted pair cable comprises
2 existing telephone wiring at the customer premises.

1 23. The system of claim 21, wherein the twisted pair cable comprises an
2 Ethernet cable.

1 24. The system of claim 15, wherein the telecommunication services
2 comprise one or more selections from the group consisting of video, data, and voice.

1 25. The system of claim 24, wherein different telecommunication services
2 are transported in different frequency ranges.

1 26. The system of claim 15, wherein the internal interfaces comprise a
2 selection from the group consisting of IEEE 1394, RG6, RG59, wireless interface, 802.11,
3 LMDS, Ethernet, twisted pair, category 3, category 4, category 5, category 6, category 7, and
4 coaxial.

1 27. The system of claim 15, wherein signals are transported on the internal
2 transport media using a protocol selected from the group consisting of HPNA, HPNA+, and
3 Home Plug.

1 28. The system of claim 15, wherein the plurality of telecommunication
2 services originate from a plurality of telecommunication service providers.

1 29. A method of delivering a plurality of telecommunication services to a
2 customer's premises, comprising:

3 receiving combined signals comprising the telecommunication services from a
4 telecommunication service provider via an external interface to a coaxial connection, wherein
5 the services are received using Data Over Cable Service Interface Specifications;

6 processing the combined signals into separate signals representative of distinct
7 telecommunication services; and

8 mapping each of the separate signals to separate ones of at least two distinct
9 internal interfaces to at least two distinct internal transport media for distribution at the
10 customer's premises via the internal transport media.

1 30. The method of claim 29, wherein the external interface is further
2 configured to direct signals relating to the telecommunication services to the
3 telecommunication service provider via the coaxial connection using Data Over Cable
4 Service Interface Specifications.

1 31. The method of claim 29, wherein at least one of the at least two
2 distinct internal interfaces is configured to receive signals relating to one of the
3 telecommunication services from one of the internal transport media.

1 32. The method of claim 29, further comprising:
2 receiving separate signals from the at least two distinct internal transport
3 media;
4 processing the separate signals into a combined signal; and
5 directing the combined signal to the external interface for distribution to the
6 telecommunication service provider via the coaxial connection using Data Over Cable
7 Service Interface Specifications.

1 33. The method of claim 29, further comprising integrating signals from
2 the at least two distinct internal transport media into a combined information set.

1 34. The method of claim 29, wherein at least one of the internal transport
2 media comprises a coaxial cable.

1 35. The method of claim 29, wherein at least one of the internal transport
2 media comprises a twisted pair cable.

1 36. The method of claim 35, wherein the twisted pair cable comprises
2 existing telephone wiring at the customer premises.

1 37. The method of claim 35, wherein the twisted pair cable comprises an
2 Ethernet cable.

1 38. The method of claim 29, wherein the telecommunication services
2 comprise one or more selections from the group consisting of video, data, and voice.

1 39. The method of claim 38, wherein different telecommunication services
2 are transported in different frequency ranges.

1 40. The method of claim 29, wherein the internal interfaces comprise a
2 selection from the group consisting of IEEE 1394, RG6, RG59, wireless interface, 802.11,
3 LMDS, Ethernet, twisted pair, category 3, category 4, category 5, category 6, category 7, and
4 coaxial.

1 41. The method of claim 29, wherein signals are transported on the internal
2 transport media using a protocol selected from the group consisting of HPNA, HPNA+, and
3 Home Plug.

1 42. The method of claim 29, wherein the plurality of telecommunication
2 services originate from a plurality of telecommunication service providers.